# A Puget Sound Coastal Landform Classification GIS database

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A coastal landform classification GIS database was developed for Washington's Puget Sound Shorelines. The approach involved using existing mapped data to separate the shoreline into segments that relate to the physical processes important in determining geology and shape (e.g., whether they are depositional or erosional). The assumption is that this classification provides for a better understanding of how the different shorelines types were formed and how susceptible a given shoreline is to impacts from various uses. The classification is meant to be implemented in assessing the ecological functions related to marine shoreline geomorphology of Puget Sound. If we consider that shoreline ecological functions are created and maintained by the flow of water, material (sediment, large woody debris) and organisms, we may infer the condition of the shoreline by identifying the source, transport and end point of these flows and the extent to which they are interrupted or remain intact. The usefulness of the classification as a planning tool for predicting shoreline susceptibility to change was tested on a subset of the data. Expected impacts to shoreline geomorphology were compared with actual changes measured through analysis of historic changes in upland and adjacent land use.